150mA Studies Plan – 12/20/2011

07:30 Beam is dumped in the SR.
Bring down the RF systems and Zone F/SR BTS P.S. For Zone F access
FMS LOTO's P.S./OPS LOTO's RF systems

08:00 Bring down Booster RF and Dipole for SR Zone F access
Access into Zone F to replace failed RF cavity blowers in S36 and S37

MCR will secure the ACIS shutter permit keys (both S1-34) in Procedural Control
MCR will secure the ACIS top-up key in Procedural Control
MCR will verify ESAF posted with F.C.

AOP Set-up monitors and trip PV monitors, including the BPM trip monitors which replace BPLD hardware
OPS will lock gaps open through software.
Controls Group designees will change the MPS SR current limit to 155mA
MCR will verify all scrapers are in the full out position.
MCR will administratively LOTO the CPU P.S.
Increase the Bunch Current Monitor attenuation to 44 dB, will monitor and adjust manually if necessary at higher currents.
HP will take background measurements with no beam stored (approximately 10 minutes)

MCR will open RF cavity turbo valves.

PS Group will have a designee available to provide support.
MOM will have designees to monitor temperatures for ceramic chambers, bellows, scrapers, and RF water.
MOM will have a designees monitor chamber, and front end pressures as well as RF gate valves.

10:00 RF Group or OPs will prepare for 150mA RF operations.(not parallel) (Raise RF4 cathode voltage to 88kV)
MCR standardize to UBOP and ramp sextupoles to 24 singlet file without P0 feedback from last run.
MCR will verify gaps have been disabled.
Store 100mA in 24 singlets as start point.

10:30 -14:00 With 24 singlets pattern, fill to 150mA – in 10 mA steps – dependent on vacuum, temperatures. MCR will make announcement.
Shutters closed during injection
After each 10mA S35 shutter open to take measurements
Allow HP 5 minute periods for monitoring outside the S35 hutch
Once 150mA reached, allow decay to 145mA, then refills with shutters closed back to 150mA

150 mA plan, 24 singlets, User orbit
Goal:
Measure Bremsstrahlung radiation as a function of beam current
Monitor the S37 vacuum tee in the 24 singlet fill pattern
Phase noise measurements at higher currents

14:00 -17:30 Store 100mA in 24 singlets as start point.
Raise current in 10-mA steps up to 150 mA.
Scan beam steering in local bumps, record temp, at every step.

150 mA plan, 24 singlets, User orbit
Goal:
Measure temperatures of vertical and horizontal scraper chambers as a function of local steering.

17:30 -18:00 Stored beam will dump beam slowly using dump beam slowly script.
RF Group or OPS will restore normal RF operations.
Return software & hardware MPS SR current limit to 105mA (hardware may be returned the following day)
Restore normal gap operation and limits.
OPS will close turbo valves. Inform the Vacuum group if pumps are to be spun down (may take place the following day).
102mA will be stored to verify normal operations.

Further 102mA studies will continue